

## Stray Creek

### Fuels Effects

The proposed treatment within the Stray Creek project would allow the fuels profile to be modified, on high value Forest lands, reducing fire intensity and severity. Moghaddas and Craggs fuels treatment journal cite (Finney 2001; Stratton 2004 and Agee et al. 2000) stating that fuel treatments are typically designed to decrease flame lengths, fire spread, and ideally, reduce landscape-level fire severity. Often, they are used in conjunction with suppression resources (Moghaddas and Craggs 2007). Reducing and breaking up portions of the fuel continuity would benefit fire suppression resources to safely and effectively control the spread of potential wildfire. Breaking up vertical and horizontal continuity of live and dead fuels can reduce passive crown fire within treated areas. Decreased flame lengths and visual contact in treated areas can allow more direct suppression methods to be employed (Moghaddas and Craggs 2007). As conditions exist now, it is unlikely that moderate to intense fire behavior in the area could be safely controlled and would have negative impacts to residence in the surrounding area, infrastructure, and forest resource values. The proposed treatment areas would have reduced surface fuels, lower crown bulk densities and a higher canopy base height which aids in preventing surface fires from shifting to the crowns during extreme conditions. Vegetation in these areas, after treatment, would have fire line intensities that allow for a strategic and safe location to conduct suppression tactics.

**Table 1.**

<b>Intensity</b>	<b>Flame Length</b>	<b>BTU/ft/sec</b>	<b>Interpretations</b>
Low	<4 feet	Less than 100	Direct attack at head and flanks with hand crews, hand lines should stop spread of fire.
Low-Moderate	4-8 feet	100-500	Employment of engines, dozers, and aircraft needed for direct attack, too intense for persons with hand tools.
Moderate	8-11 feet	500-1000	Control problems, torching, crowning, spotting; control efforts at the head are likely ineffective.
High	> 11 feet	Greater than 1000	Control problems, torching, crowning, spotting; control efforts at the head are ineffective.

Direct attack with hand crews can only be effective with flame lengths under four feet. Once flame lengths surpass this mark fires are too intense for direct attack, other indirect suppression tactics such as dozers, aerial resources, and tactical burning must be used to control the spread of the fire (Table 1). The treatments would remove enough fuel to directly affect fire behavior by reducing potential flame lengths to 4 feet or less, increasing canopy base height to 6 feet or more and lowering crown bulk densities to limit the possibility of crown fire.

### *Forest Plan Direction*

The CWF Forest Plan (USDA Forest Service 1987) provides the overall direction of management activities on the Forest. Forest-wide management goals, as well as management area direction, represent the desired future condition that management actions are designed to achieve. The following are the forest goal and management area direction for the project relative to fire and fuels management.

Fire Protection Goals (FP II-4 (16) are to:

- Prevent and suppress wildfires commensurate with resource values to protect while recognizing the role of fire in ecological processes.
- Manage activity and natural fuel loadings by reducing to acceptable levels through utilization.
- Coordinate with the State of Idaho Air Quality Bureau to develop a smoke management program for prescribed burning in the State

Management Area E1 goals, are to limit the size on wildfires in immature timber to one acre or less, in mature timber to 40 acres or less, and in brush fields to 500 acres or less. Prescribed fire from planned ignitions may be used to treat activity and natural fuel loadings. The protection standards for E1 lands are to confine, contain, or control wildfires.

Management Area C4 goals, are to treat logging residue to prepare sites for reforestation, to break up continuous fuel beds, to remove barriers to big-game movement, and to improve forage, limit size of individual wildfires to 40 acres or less, and use prescribed fires from planned ignitions as needed to achieve Forest Plan direction. The protection standards for C4 lands are to confine, contain, or control wildfires.

### ***Air Quality***

The Clean Air Act and its amendments were designed to: 1) protect and enhance the nation's air resources, 2) initiate and accelerate a national research and development program to prevent and control air pollution, 3) provide technical and financial assistance to state and local governments for development and execution of air pollution prevention and control programs, and 4) encourage and assist the development and operation of regional air pollution control programs.

The Forest Service is a member of the Montana/Idaho Airshed Group The Airshed Group is composed of state, federal, tribal and private member organizations who are dedicated to the preservation of air quality in Montana and Idaho. Its members are prescribed burners and the public health and regulatory agencies that regulate the burning working cooperatively to prevent smoke impacts while using fire to accomplish land management objectives. All post activity fuel reduction treatments would adhere to the requirements of the Montana/North Idaho Smoke management guidelines. The analysis area falls within Airshed 12B. The Montana/Idaho Airshed Group Operating Guide can be found at:

[http://www.fs.fed.us/r1/fire/nrcc/smoke\\_web\\_pages/OpGuide.pdf](http://www.fs.fed.us/r1/fire/nrcc/smoke_web_pages/OpGuide.pdf)